

Regulatory Options Under Consideration for Pea Leaf Miner (*Liriomyza huidobrensis*) and *Liriomyza langei*

Pea leaf miner is an exotic, highly polyphagous leaf miner capable of inflicting severe damage to crops such as field- and glasshouse-grown vegetables and flowers. Pea leaf miner is a mining fly of the insect family Agromyzidae. Pea leaf miner can be found in Africa, Asia, Central and South America, Europe, the Middle East, and Oceania. This fly was also considered to be present in the States of California, Hawaii, Oregon, and Washington. As pea leaf miner was previously thought to be present in several States, pursuant to our plant pest authorities under the Plant Protection Act and obligations under the provisions of the International Plant Protection Convention, APHIS determined that it was best to regulate pea leaf miner under an official control program in a manner consistent with the pest controls necessary for the State or region of the port of entry. That is, APHIS supports actions taken by States to exclude pea leaf miner on shipments moving interstate into noninfested States. For instance, APHIS currently takes action on shipments destined for Florida because that State employs an effective exclusion program to prevent introduction of the pest.

Leaf mining flies of the insect family Agromyzidae, which includes pea leaf miner, arrive in commerce almost exclusively as immature larvae or pupae. Because these immature insects cannot be identified using morphological characters alone, APHIS usually takes action only when *Agromyzidae* are found on commodities in order to exclude exotic pests that the unidentifiable immature flies may represent. Only in the few cases where surveys on specific crops in specific countries determined that pea leaf miner was virtually the only species of *Agromyzidae* on those crops (i.e., snow peas and onions from Guatemala and chrysanthemum from the Dominican Republic, Costa Rica and Colombia) can we appropriately assume that the intercepted, immature flies are pea leaf miner. Accordingly, APHIS takes action for movement into Florida on any intercepted pea leaf miner identified to *Agromyzidae* on the numerous imported vegetable and flower hosts from countries throughout pea leaf miner's distribution in Africa, Asia, Central and South America, Europe, the Middle East, and Oceania. However, when immature leaf miners that may or may not be pea leaf miner are intercepted on commodities from other countries (or other commodities from Guatemala, the Dominican Republic, Costa Rica or Colombia), we take action for all States since, as previously stated, in the absence of surveys, we do not know which *Agromyzidae* the unidentifiable immature flies represent.

Below, we have presented three regulatory options that APHIS is considering for regulating pea leaf miner. With each option, we have provided the results of the option if selected. When evaluating these options, please note that APHIS usually takes action to prevent the introduction of intercepted pests identified only to the family level, or Agromyzidae in this case. Options 1-3 pertain to cases where an intercepted pest can be identified to either *L. huidobrensis* or *L. langei*.

1. Regulate imported commodities for pea leaf miner into all US States.

This option presumes the flies are different species and distinct entities for regulatory purposes. As such, pea leaf miner is not known to occur in the United States and is considered an exotic, quarantine significant pest.

If pea leaf miner is detected on any imported commodity from any country that has pea leaf miner, APHIS would take action on the commodity by requiring treatment for pea leaf miner, regardless of the destination of the commodity or port of importation into the United States.

(At this time, *L. langei* is known only to occur in the United States. If, in the future, *L. langei* is shown to be present in foreign regions, APHIS would only take action on *L. langei* on imports destined to States that have effective exclusion or control programs for *L. langei*.)

2. Regulate imported commodities for pea leaf miner into Florida only.

This option presumes the flies are not distinct entities for regulatory purposes.

APHIS would continue to regulate the importation of commodities that pose a risk of introduction of pea leaf miner into Florida. APHIS would also support actions by the State of Florida to exclude *L. langei*. APHIS would take action on *L. langei* on imports destined to Florida or any other State with effective exclusion or control programs for *L. langei*. However, at this time, *L. langei* is known to only occur in the United States.

3. Provide no regulation of imports for pea leaf miner or *L. langei*

APHIS would not take action on imports for pea leaf miner and/or *L. langei*.

This option, as with the preceding option, is based on a determination that pea leaf miner and *L. langei* are not distinct entities for regulatory purposes. However, under this option, APHIS would no longer consider pea leaf miner to be a quarantine pest because of its determined close association with *L. langei*, a presumably endemic species. Accordingly, States would be free to regulate commodities moving interstate for the presence of *L. langei* or pea leaf miner, if found to be present in the United States, but not imports.